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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/812,847

03/30/2004

Tsuyoshi Kamada

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3128

24978 7590 03/24/2008

GREER, BURNS & CRAIN
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EXAMINER

SHAPIRO, LEONID

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

03/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,847	KAMADA ET AL.	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) 8-81 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 5 is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/30/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-2,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (7,205,970) in view of Kimura (US 2002/0118153 A1).

As to claim 1 Kim teaches an image processing method (col. 1, lines 8-12),
comprising the steps of:

combining a higher-luminance pixel to be driven at a higher luminance than luminance data of an image to be displayed and a lower-luminance pixel to be driven at lower luminance than the luminance data (figs. 7A-7B, items A-B, from col. 6, line 66 to col. 7, line 25); and

determining a luminance on the higher-luminance pixel and luminance on the lower-luminance pixel so that a luminance can be obtained substantially equal to a desired luminance based on the luminance data (col. 7, lines 36-41).

Kim et al. does not disclose an area ratio of the higher-luminance pixel and the lower-luminance pixel.

Kimura teaches an area ratio of the higher-luminance pixel and the lower-luminance pixel (paragraphs 0002,0017,0022).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Kimura into Kim et al. system in order to implement a grayscale function (par. 0002 in the Kimura reference).

As to claim 2, Kim teaches the combination of the higher-luminance pixel and the lower-luminance pixel changes frame by frame (col. 7, lines 7-19).

As to claim 6, Kim teaches a liquid-crystal display device having a liquid crystal sealed between an array substrate and an opposite substrate that are oppositely arranged with a predetermined cell gap, the liquid-crystal display device characterized by having a drive circuit for realizing an image processing method (fig. 5, items 100,400, col. 23-31).

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. and Kimura in view of Koma (7,133,101 B2).

Kim and Kimura do not disclose the liquid crystal has a negative dielectric anisotropy and is in a vertical alignment under no application of voltage.

Koma teaches the liquid crystal has a negative dielectric anisotropy and is in a vertical alignment under no application of voltage (col. 2, lines 24-35).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Koma teachings into Kim et al. and Kimura system in order to achieve a wider viewing angle (col. 3, lines 1-6).

Allowable Subject Matter

3. Claims 4-5 are allowed.

Relative to claim 4 the major difference between the teaching of the prior art of record (Kim et al., Kimura ,Koma) and the instant invention is that determining a luminance on the higher-luminance pixel and luminance on the lower-luminance pixel and an existence ratio of the higher-luminance frame and the lower-luminance frame so that a luminance can be equal to desired luminance.

Claim 5 depends on claim 4.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claim 4 the major difference between the teaching of the prior art of record (Kim et al., Kimura ,Koma) and the instant invention is that an area ratio of the higher-luminance pixel and the lower-luminance pixel is from 1 : 1 to 1 : 20.

Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. S./
Examiner, Art Unit 2629
03.04.08

/Richard Hjerpe/
Supervisory Patent Examiner, Art Unit 2629